

A NEW GENUS AND SPECIES OF NEARCTIC COENOMYIID  
(DIPTERA: COENOMYIIDAE)

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*Abstract.*—*Napemyia illinoensis*, a new genus and species of coenomyiid, is described, and its relationship to other genera of Coenomyiidae is discussed.

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During a collecting trip in 1976 to Forest Glen Forest Preserve, a beech-maple forest in Vermilion County, Illinois, one male specimen of a unique fly was collected by M. E. Irwin. I have made several trips each year for the last six years and have not collected additional specimens, nor have I found additional specimens in 67 museum, university, and private collections that I have examined. A manuscript, in preparation, on the phylogeny of certain lower brachycerous Diptera in the Nearctic Region necessitates the erection of this new genus and species.

*Napemyia* Webb, NEW GENUS

Derivation of name.—*Nape* (Greek, feminine) = glen; *myia* (Greek, feminine) = fly.

Type-species.—*Napemyia illinoensis* Webb, by present designation.

*Napemyia* is closely associated with *Dialysis* in having the eyes glabrous, the clypeus flat, the anal and 3rd medial cell closed, and the aedeagal apodemes reaching the base of the basistyle. It differs from *Dialysis* (Webb, 1978) in having elongate parafacial setae, the ventral plate of the proctiger narrowly emarginate posteriorly, the basistyle in ventral view with no open areas, penis valves present, and in lacking a thyridium.

This description of the genus is based on one male specimen; the female is unknown.

Male.—Head in lateral view hemispherical (Fig. 1). Vertex (Fig. 2) rounded, not emarginate lateral to ocellar tubercle. Ocellar tubercle subtriangular, slightly raised above vertex. Eyes large, holoptic, contiguous for short distance ventral to median ocellus; facets of equal size; glabrous; medial margin rounded, ventral half diverging; no emargination dorsolateral to base of scape; in lateral view hemispherical, covering almost all of head. Frons small; setae and median tubercle absent. Antenna (without arista) short, 0.3× width of head in lateral view; scape short, subrectangular, shorter than pedicel; pedicel globose; flagellum short, conical, shorter than combined length of scape and pedicel; arista elongate, apical. Gena narrow; parafacial setae elongate. Clypeus with anterior surface flat, gla-

brous; lateral grooves shallow. Maxillary palpus with 1 segment, cylindrical. Labellum membranous.

Thorax with dorsum rounded; vittae and posterior tubercles absent. Postmetaspiracular scale and suprametacoxal pit absent. Mesoscutellum with posterior margin rounded; posterior tubercles absent.

Wing (Fig. 3) with microtrichia covering entire wing; thyridium absent. Costa circumambient, broader along anterior margin; setae short, subappressed. Subcosta ends beyond middle of wing. Subcostal and marginal cells narrow, elongate, open. Cell  $R_4$  large, enclosing apex of wing.  $R_4$  ends anterior to apex of wing.  $R_5$  ends posterior to apex of wing.  $M_1$ ,  $M_2$ , and  $M_3$  originate separately from apical margin of discal cell. Five posterior cells. Cell  $M_3$  open. Discal cell broad, apical margin pointed. First basal cell narrow, elongate, apex truncate, ends distal to apex of 2nd basal cell. Anal angle broadly rounded, right-angled. Alula large, broadly rounded.

Forecoxa elongate, mid- and hindcoxae short; hindcoxa without anterior tubercle. Tibial spurs 1-2-2. Empodium pulvilliform, similar in size and shape to pulvilli. Apical claws on tarsomere 5 fuscous, paired, simple. Hindlegs not raptorial.

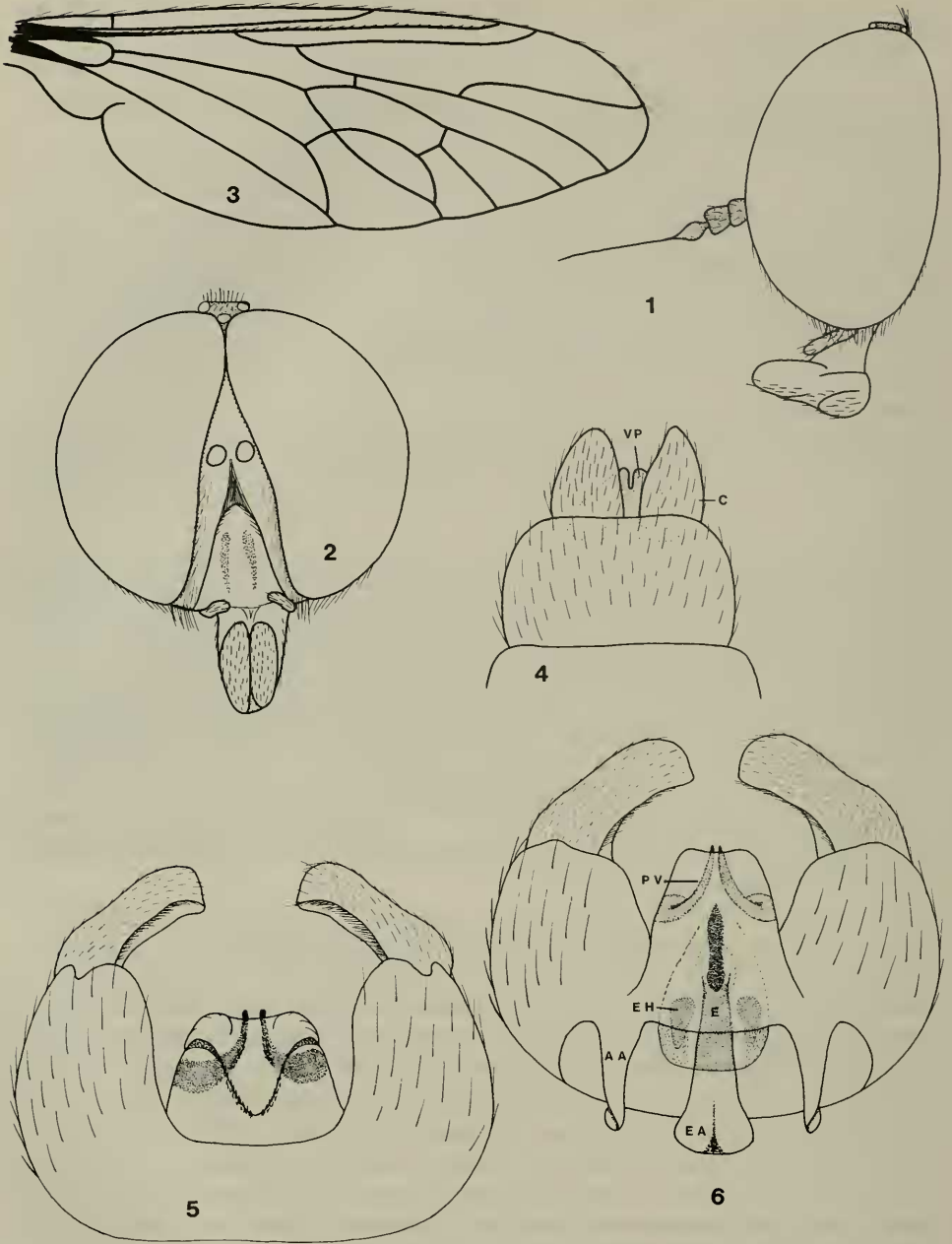
Abdomen with tergite 1 subrectangular, broad, anterior margin truncate. Tergite 9 (Fig. 4) reduced, tapered laterally, posterior margin rounded. Tergite 10 absent. Cerci (C) 1 segmented, lobate. Ventral plate of proctiger (VP) large, membranous, subtriangular, separated medially. Sternites 9 and 10 absent. Basistyle in ventral view (Fig. 5) broad, rounded laterally, fused anteriorly; in dorsal view (Fig. 6) basistyle with narrow sclerotized arch joining inner margins; aedeagal apodemes (AA) elongate, reaching base of basistyle. Dististyle large, thick, truncate apically, with short apical spines. Aedeagus composed of aedeagal sheath, endophallus (E), endophallic hilt (EH), and penis valves (PV). Aedeagal sheath broad basally, tapered posteriorly to form broad endophallic guide, with ventral membranous covering. Endophallic tines absent.

### *Napemyia illinoensis* Webb, NEW SPECIES

Figs. 1-6

Male.—Length 10.9 mm. Ocelli pale yellow; ocellar tubercle fuscous; setae pale brown, elongate, along posterior margin. Frons pale yellowish brown to fuscous. Scape  $0.9\times$  longer than wide,  $0.9\times$  length of pedicel, setae fuscous, short, suberect on dorsal and lateral margins, stramineous ventrally; pedicel  $1.1\times$  longer than wide, setae similar to those of scape; flagellum conical,  $1.0\times$  longer than wide  $0.4\times$  combined length of scape and pedicel, setae absent; arista elongate apical,  $6.0\times$  length of flagellum. Gena dark brown; parafacial setae stramineous, elongate, sparse; facial setae stramineous, elongate, abundant. Clypeus stramineous with 2 dark brown bands. Maxillary palpus stramineous, 1 segmented,  $5.0\times$  longer than wide; setae stramineous, elongate, abundant. Labellum stramineous; setae stramineous, elongate, abundant on ventral surface. Postocular setae stramineous, elongate, abundant, becoming short, fuscous, subappressed dorsally.

Thorax dark yellow; setae stramineous, suberect, abundant, with no distinctive pattern. Humeral callus concolor with thorax; setae stramineous, elongate, abundant. Pleural setae stramineous, elongate, covering all of propleuron, ventral  $\frac{1}{3}$  of mesokatepisternum, and in sparse median patch on mesoanepimeron; re-



Figs. 1-6. *Napemyia illinoensis*. 1, Head, lateral view. 2, Head, frontal view. 3, Wing. 4, Male terminalia. 5, Basistyle, ventral view. 6, Basistyle, dorsal view. Abbreviations: AA = aedeagal apodeme; C = cercus; E = endophallus; EA = endophallic apodeme; EH = endophallic hilt; PV = penis valve; VP = ventral plate of proctiger.

maining pleurites glabrous. Halter pale yellowish brown; setae absent. Mesoscutellars mesopostnotal, and lateral tergal setae stramineous, elongate, abundant.

Wing (Fig. 3) length 9.2 mm,  $2.6\times$  longer than wide. Membrane pale infusate; veins pale whitish brown; pterostigma absent; macrosetae on entire length of  $R_1$ . Radial sector originates from middle of 1st basal cell. R-m occurs at basal  $\frac{1}{3}$  of discal cell.  $R_{2+3}$  ends distal to fork of  $R_{4+5}$  and discal cell, basal to apex of  $M_1$ . Fork of  $R_{4+5}$  originates distal to apex of discal cell, angle rounded. Cell  $M_3$  and anal cell closed, petiolate. M-cu  $2.0-2.5\times$  length of r-m. Squama small, stramineous; marginal setae stramineous, short, entire.

Legs dark yellow. Empodium and pulvilli dark yellow. Hindcoxa without anterior tubercle.

Abdomen dark yellow; setae mixed, stramineous and fuscous, elongate, abundant. Basistyle in ventral view (Fig. 5), in dorsal view (Fig. 6). Endophallus (E) broad anteriorly, forming endophallic apodeme (EA) with truncate anterior margin, median area thick, posterior area oval, pointed. Endophallic hilt (EH) narrow, triangular, elongate, tapered anteriorly, separated medially. Penis valves (PV) broad, thick, inner margin with abundant, fine spines.

Holotype.— $\delta$ , ILLINOIS, Vermilion County, Forest Glen Forest Preserve, 5 mi SE Westville, 25-VI-1976, M. E. Irwin. Deposited in Illinois Natural History Survey.

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